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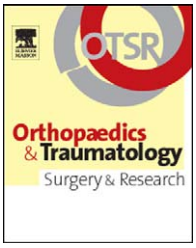

LETTER TO THE EDITOR

Response to the letter by Daniel Goutallier and Stéphane Vandriessche

To the editor, it is with great interest that we read the letter submitted by Drs. Goutallier and Vandriessche concerning our article ''Open wedge high tibial osteotomies: calcium-phosphate ceramic spacer versus autologous bone graft'' published in your journal. We sincerely thank the authors for their interest in our study and the in-depth analysis they contribute. Their experience and their team's work on valgus tibial osteotomy are the reference in France and abroad and we reference two of their studies in our report.

Drs. Goutallier and Vandreissche believe that our cautious conclusions on the use of ceramic spacers in cases of rupture of the lateral hinge are debatable, in the sense that the lateral hinges are frequently fractured and that the posterolateral cortical epiphyseal screws provide, in their experience, sufficient mechanical stability. The position of the epiphyseal screws was not specifically studied in this report. We also confirm that given the anteromedial position of the plate, the tip of the epiphyseal screws is most often posterolateral but rarely intracortical: these are 6.4-mm cancellous bone screws whose trajectory is imposed by the system fixing the screws to the plate (first-generation interlocking screws, i.e., no clearance possible); despite an osteotomy 4.5 cm under the joint space, the trajectory limits the screw length so they do not enter the intra-articular space. Therefore, with the mechanical system that we use (this type of plate, its position, the screws used with it, a substitute with no initial mechanical value), rupture of a lateral hinge is a risk factor for angle loss and malunion of the osteotomy, the source of the reservations expressed in our conclusion. However, and on this point, we entirely agree with Drs. Goutallier and Vandriessche, there are certainly means to limit or remove this risk associated with the very frequent hinge ruptures: screws with posterolateral bone purchase and a mechanically solid cement wedge for the authors of this letter, tricortical grafts such as in the control arm of this study, addition of a lateral staple if a rupture exists or doubt remains as to the view on the intraoperative image intensifier (the technique that we now use).

As for the reference arm chosen, within a controlled study on a bone substitute, autologous grafts are most frequently the best choice. All the controlled studies reported in the literature assessing a bone substitute, in indications in which an autologous alternative exists, make autologous bone the reference (even if there are excellent non biological alternatives to bone substitutes, as proven by the results reported by Goutallier et al.); this is the standard from a biological point of view when the objective is reconstruction with live bony tissue. In addition, in the technique proposed by the authors of this Letter to the Editor, the cement wedge must be understood as part of the system supporting the osteotomy in the same way as the plate used and not as a bone substitute: it is the local cancellous bone harvested on the osteotomy surfaces or the ossification of the hematoma that ensures the reconstruction. Therefore, before assessing a material in a given indication (here valgus tibial osteotomy) compared to the absence of filling (or partial filling) of the defect, one must evaluate whether the absence of filling would produce the same results as the standard, here autologous graft material. Based on the data reported in the literature, today, it is difficult to propose a technique with no filling as the reference arm, for which there have only been two referenced articles to our knowledge [1,2].

Finally, whatever the value and the fundamental importance of retrospective single-center studies in our specialization, controlled, prospective, and even more so multicenter studies can reveal the limits or weaknesses of a technique, as in the results of this study.

We again thank Drs. Goutallier and Vandriessche for having provided the opportunity to complete our study with these details and for their interest in this work.

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